



**NSAI**  
Standards

Irish Standard  
I.S. EN 16447:2014

## Explosion isolation flap valves

**I.S. EN 16447:2014**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

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English Version

## Explosion isolation flap valves

Vanne à clapet d'isolation d'explosion

Rückschlagklappen zur explosionstechnischen Entkopplung

This European Standard was approved by CEN on 28 May 2014.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## **Foreword**

This document (EN 16447:2014) has been prepared by Technical Committee CEN/TC 305 “Potentially explosive atmospheres - Explosion prevention and protection”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2015 and conflicting national standards shall be withdrawn at the latest by January 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## EN 16447:2014 (E)

### 1 Scope

This European Standard describes the general requirements for flap valves used for dust explosion isolation. An explosion isolation flap valve is a protective system, which prevents a dust explosion from propagating via connecting pipes or ducts into other parts of apparatus or plant areas.

An explosion isolation flap valve can only stop the propagation of a dust explosion when it propagates against the direction of the normal process flow. It does not stop explosions running in the normal process flow direction. This European Standard specifies methods for evaluating the efficacy of explosion isolation flap valves.

This European Standard is applicable only to explosion isolation flap valves which are intended to avoid explosion propagation from a vessel, into other parts of the installation via connecting pipes or ducts. The standard covers isolation of such vessels that are protected by explosion venting (including flameless venting), explosion suppression or explosion resistant design.

NOTE 1 This standard is only applicable to cases where the explosion starts in a vessel and not in pipes or ducting.

Explosion isolation flap valves are not designed to prevent the transmission of fire or burning powder transported by the normal process flow.

NOTE 2 It is necessary to take this into account in risk assessments.

This European Standard is only applicable for dust explosions.

This European Standard is not applicable for explosions of materials listed below, or for mixtures containing some of those materials:

- a) gases, vapours and hybrid mixtures;
- b) chemically unstable substances;
- c) explosive substances;
- d) pyrotechnic substances.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13237, *Potentially explosive atmospheres - Terms and definitions for equipment and protective systems intended for use in potentially explosive atmospheres*

EN 14373, *Explosion suppression systems*

EN 14460, *Explosion resistant equipment*

EN 15089, *Explosion isolation systems*

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